



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/521,583

01/18/2005

Jochen Eisl

449122078400

2776

29177 7590 05/14/2008
BELL, BOYD & LLOYD, LLP
P.O. BOX 1135
CHICAGO, IL 60690

EXAMINER

TAHA, SHAQ

ART UNIT

PAPER NUMBER

2146

MAIL DATE

DELIVERY MODE

05/14/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/521,583	EISL ET AL.	
	Examiner	Art Unit	
	SHAQ TAHA	2146	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 3, 5 - 7, and 9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 3, 5 - 7, and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is a final action for application number 10/521,583 based on after non-final filed on 02/21/2008. The original application was filed on 01/18/2005. Claims 1 – 3, 5 – 7, and 9 are currently pending and have been considered below. Claims 1, and 9 are independent claims.

Response to Arguments

The applicant argues that Forslow et al. (US 6,973,057) does not disclose that a preconfigured label switched path between a home agent and a foreign agent is used for forwarding an IP data packet to a mobile host respectively a mobile node.

The examiner disagrees, Forslow et al. teaches a Public mobile data communications network, wherein an IP data packet is sent between a home agent and a foreign agent using a label switch path, **(Col. 4, line 8)**; and When a label packet arrives at an LSR, the forwarding component uses the input port number and label to perform an exact match in its forwarding table. When a match is found, the forwarding component retrieves the outgoing label, the outgoing interface, and the next-hop router address from the forwarding table, wherein when there is a match **(Col. 4, line 47)**.

The applicant argues that Forslow et al. (US 6,973,057) is silent about statically administered preconfigured label switch path.

The examiner disagrees, Forslow et al. discloses that the label switch (referred also as a label switched router (LSR)) performs a routing table lookup, maps the packet to an

Art Unit: 2152

FEC, and then assigns a label to the packet before forwarding it to the next LSR in the label switched path (LSP). Ultimately, LSR ignore the data packet's network layer header and simply forward the data packet using the label swapping algorithm, wherein the label switch path is preconfigured to for the IP packet to be tunneled between foreign agent and home agent wherein this path doesn't change which means it is statically administered.

Also, Hiller et al. teaches a Method and system for support of overlapping IP addresses between an interworking function and a mobile IP foreign agent, while Forslow teaches A public mobile access data network provides a mobile node data access to the Internet and data access to the mobile node from the Internet even when a point of attachment of the mobile node to the public mobile access data network changes, the combination of Forslow and Hiller teaches a match between the destination address and the foreign agent, and that there is a label switch path between a foreign agent and a home agent, and that preconfigured label switch is not modified or created and it is statically administered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2152

- Claims 1 – 3, 5 - 7, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiller et al. (US 6,445,922), and further in view of Forslow et al. (US 6,973,057).

Regarding claim 1 and 9, Hiller et al teaches a method for transfer of an IP packet over a path from a sender over a radio access network to a mobile host, **[A method and system are disclosed for supporting overlapping IP addresses by sharing a mobile node identifier between an IWF and a Foreign Agent in a visited data (e.g., wireless) network, (See Abstract)];**

comprising: examining, when a home agent receives an incoming data packet determined for a mobile host with a destination address, **[For data packets moving in the reverse Mobile IP traffic direction (from the mobile node), the Foreign Agent uses the mobile node identifier to identify the correct Home Agent destination by finding the corresponding Home Agent address in the Visitor List table, (See Abstract)];**

if there is a match between the destination address of the packet and a sub network address of a foreign agent listed in a list of sub network addresses, **[For forward Mobile IP traffic (to the mobile node), the IWF uses the mobile node identifier to identify the correct mobile node destination by finding the corresponding link identifier in the Mobile Identity table, (See Abstract)];**

stored at the home agent (HA), **[sharing step includes storing said mobile node identifier, along with a mobile node home (IP) address and a Home Agent IP**

address associated with a mobile node identified by said mobile node identifier, (Column 9, lines 19 – 23)];

and examining, if there is a match between the destination address and a sub network address of a foreign agent, whether a preconfigured path from the home agent to the foreign agent exists, **[The IWF 8 verifies that the mobile node 4's IP address in the registration request message matches the address in the Mobile Identity table 18 and then routes the registration request and NAI to the Foreign Agent 10, (Column 6, lines 26 – 29);**

Hiller et al teaches the method wherein a handover of a mobile host from one foreign agent to an other foreign agent is done without creating or modifying a path between the foreign agent and a home agent of the mobile host, **[The Foreign Agent and a Home Agent (a router located in the mobile node's home network) exchange data packets between each other via a tunnel, wherein the path between foreign agent and home agent is not modified or created, (Fig. 2, Ref # 10, 12),(Column 1, lines 42 – 45)];**

Hiller et al. differs from the claimed invention is that a preconfigured label switched path is not taught in Hiller et al.

Forslow et al. teaches a public mobile access data network provides a mobile node data access to the Internet and data access to the mobile node from the Internet even when a point of attachment of the mobile node to the public mobile access data networks changes, **(Abstract);**

Forslow et al. further teaches a The mobile IP packets are carried using multi-protocol label path switching (MPLS) label switched paths (LSPs) which provide a number of benefits such as tunneling flexibility, configurability, and efficiency, **(Abstract)**; an interface for transmitting a packet to a determined foreign agent on a determined, preconfigured path, [Fig. 1, wherein In the mobile radio access 12, one or more mobile nodes 14 communicate over a radio interface with one or more radio base stations (BS) 16 using for example some radio access network];

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Hiller by including determining a preconfigured label switched path as taught by Forslow.

One of ordinary skill in the art would have been motivated to make this modification in order to provide the advantage of a preconfigured label switched path.

Regarding claim 2, Hiller et al teaches the method, wherein the home agent sends the packet to the foreign agent on the preconfigured label switched path, **[Once the mobile node's Home Agent is determined, the Foreign Agent sends the data packet to that Home Agent, (Column 2, lines 48 – 51)]**.

by sending the packet over a port of a forwarding interface of the home agent which port is used for the path with the path number, **[While communicating with other network nodes, the mobile node communicates across an air interface to a base station, and typically sends and receives data packets over a Point-to-Point Protocol (PPP) link that connects the mobile node to a centralized network element known**

as an Inter working Function (IWF) that hides cellular specific aspects from the general IP network, (Column 1, lines 30 – 36)].

Regarding claim 3, Hiller et al teaches the method wherein the home agent examines if there is a match between the destination address of the packet and a sub network address of a foreign agent if there is an entry in a binding cache of the home agent which entry corresponds to the destination address of the incoming packet, **[This invention relates to the routing of data packets to and from a mobile node in a visited wireless data network when the mobile node's home address matches the home address of another mobile node in the same visited network, (Column 1, lines 17 – 20)].**

Regarding claim 5, Hiller et al teaches the method wherein the preconfigured label switched path is preconfigured, statically administered, and multipurpose label switched path, **[For forward Mobile IP traffic (to the mobile node), the IWF uses the mobile node identifier to identify the correct mobile node destination by finding the corresponding link identifier in the Mobile Identity table, (See Abstract)].**

Regarding claim 6, Hiller et al teaches the method wherein the functional entities of mobile IP and multipurpose label switching are co-located but not correlated in a foreign agent, **[The Foreign Agent is unable to ascertain the difference between the two mobile nodes because it relies on the mobile node's home address to determine**

the Home Agent to which the data packets should be sent -or tunneled. When the two mobile nodes have the same home address, the Foreign Agent cannot perform its normal reverse direction routing functions, (Column 2, lines 6 – 12)].

Regarding claim 7, Hiller et al teaches the method wherein a foreign agent and a home agent are packet switched nodes of an IP network, **[The Foreign Agent and a Home Agent (a router located in the mobile node's home network) exchange data packets between each other via a tunnel, (Column 1, lines 42 – 45)].**

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2152

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Shaq Taha** whose telephone number is 571-270-1921.

The examiner can normally be reached on 8:30am-5pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Jeff Put** can be reached on 571-272-6798.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

05/08/08

S. Taha

/Bunjob Jaroenchonwanit/

Supervisory Patent Examiner, Art Unit 2152